



Europäisches Patentamt
European Patent Office
Office européen des brevets

European Patent Office
Postbus 5818
2280 HV Rijswijk
NETHERLANDS
Tel: +31 70 340 2040
Fax: +31 70 340 3016

Skuhra, Udo
Reinhard-Skuhra-Weise & Partner GbR
Friedrichstrasse 31
80801 München
ALLEMAGNE

Formalities Officer
Name: Lekahena, Clifford
Tel: +31 70 340 - 0
or call
+31 (0)70 340 45 00

Substantive Examiner
Name: Arias Pérez, Jagoba
Tel: +31 70 340 - 4194



Application No. 05 703 842.4 - 1239	Ref. P21318 S/hen	Date 14.04.2008
Applicant ROHM CO., LTD.		

Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

of 4 months

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC.

One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).



Arias Pérez, Jagoba
Primary Examiner
for the Examining Division



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

European Patent Office
Postbus 5818
2280 HV Rijswijk
NETHERLANDS
Tel: +31 70 340 2040
Fax: +31 70 340 3016

Enclosure(s): 0 page/s reasons (Form 2906)



Bescheid/Protokoll (Anlage)	Communication/Minutes (Annex)	Notification/Procès-verbal (Annexe)
Datum Date Date 14.04.2008	Blatt Sheet Feuille 1	Anmelde-Nr.: Application No.: 05 703 842.4 Demande n°:

The examination is being carried out on the following application documents:

The application documents as originally filed

- 1 The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: US-A-5 646 520 (RICHARD FRANK et al) 8 July 1997
D2: JP 09 167928 A (DENSHI SANSEI) 24 June 1997 *
D3: US-A-5 670 867 (TSUYOSHI MITSUDA) 23 September 1997 *

* document cited as evidence of the skilled person's common general knowledge.

- 2 The present application does not meet the requirements of Article 52(1) EPC, because, with respect to each of document D1, the subject-matter of independent claim 1 is not new in the sense of Article 54(1) and (2) EPC.

Document D1 (see in particular figure 6 and accompanying text) discloses a method for detecting an overcurrent flowing through an output transistor and a device using that method. The overcurrent detection circuit in D1 comprises a monitor transistor (604), whose control and output terminals are connected to the control and output terminals of the output transistor (602), an output current detection transistor (606), whose input terminal is connected to the power supply, its output terminal is connected to the input terminal of the monitor transistor (604) and its control terminal is connected to a bias voltage (Vg), a constant current source (612), a reference transistor (608), which receives the current from the source and which shares the gate voltage with the output current detection transistor, and a comparison circuit (see col. 7, lines 26 to 30) that detects overcurrent flows by comparing the voltage of the output terminal of the output current detection transistor (Vsense) and the voltage of the output terminal of the reference transistor (Vref).



Bescheid/Protokoll (Anlage)	Communication/Minutes (Annex)	Notification/Procès-verbal (Annexe)
Datum Date Date 14.04.2008	Blatt Sheet Feuille 2	Anmelde-Nr.: Application No.: 05 703 842.4 Demande n°:

Hence D1 discloses in combination all technical features of claim 1, whose subject-matter is therefore not new.

- 3 Dependent claims 2 to 4 do not contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of Article 54(1) and (2) EPC regarding novelty and Article 56 EPC regarding inventive step.
 - 3.1 The additional features of claim 2 are a standard measure to adapt the circuit in D1 to the working conditions for a measuring currents in the high-side. If the skilled person wanted to measure the current in this side of the supply voltage, he would replace all the NMOS transistors in D1 with PMOS transistors, thus arriving to the circuit in claim 2.
 - 3.2 The feature added by claim 3 is a well known way of implementing an operational amplifier (see D2, figure 1 and accompanying text), which is itself one of the most common types of comparators the skilled person would use in the circuit of figure 6 of D1.
 - 3.3 The features added by claim 4 amount to integrating the overcurrent detection circuit of claim 1 into a regulator, which is one of the most common applications of such circuits.
- 4 For the sake of completeness the following minor deficiencies are mentioned:
 - 4.1 Contrary to the requirements of Rule 42(1)(b) EPC, the documents D1, D2 and D3 are not identified in the description and the relevant background art disclosed therein is not at least briefly discussed.
 - 4.2 Contrary to the requirements of Rule 43(1) EPC, the independent claims are not properly drafted in the two-part form, with those features which in combination are part of the closest prior art (cf. document D1) being placed in the preamble.
 - 4.3 No reference signs in parentheses have been inserted in the claims to increase their intelligibility (Rule 43(7) EPC). This applies to both the preamble and characterising



Bescheid/Protokoll (Anlage)	Communication/Minutes (Annex)	Notification/Procès-verbal (Annexe)
Datum Date Date 14.04.2008	Blatt Sheet Feuille 3	Anmelde-Nr.: Application No.: 05 703 842.4 Demande n°:

portion (see the Guidelines, C-III, 4.19).

5 Because of the reasons stated in sections 2 to 4 above, claims 1 to 4 are not allowable. In view of the available prior art, it does not appear that any part of the application could serve as a basis for a new allowable claim. Thus, in the present case it would appear that the application should be refused under Article 97(1) EPC.

Should the applicant nevertheless regard some particular matter as patentable, he is reminded that the application may not be amended in such a way that it contains subject-matter which extends beyond the content of the application as filed (Article 123(2) EPC).

In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

J. Arias Pérez

REINHARD · SKUHRA · WEISE & PARTNER GbR

PATENT- UND RECHTSANWÄLTE
GERMAN AND EUROPEAN PATENT ATTORNEYS
EUROPEAN TRADEMARK AND DESIGN ATTORNEYS · ATTORNEYS AT LAW

Europäisches Patentamt
Erhardtstraße 27

D-80298 München

EPO - Munich
56
05. März 2008

PATENT ATTORNEYS

Udo Skuhra
Dr. Werner Behnisch
Dr. Stephen Barth
Glyndwr Charles
Oliver Hesse
Ralf Peckmann
Wolfgang Sandmann
Dr. Tobias Kleimann (DPMA)
Frank Weitzhofer (DPMA)
Daniel Pepst (DPMA)

ATTORNEYS AT LAW
Michaela Wöhrle
Ina-Mare Helbig
Vera Dalichau

Ihr Zeichen/your ref.

Unser Zeichen/our ref.

München/Munich

P21318 S/gut

March 4, 2008

European Patent Application No. 05703842.4-1239

Applicant: Rohm Co., Ltd.

This is in response to the Communication pursuant to Rule 70(2) EPC dated January 07, 2008:

Applicant desires to proceed further with the application.

U. BeLsU

Dr. Werner Behnisch
European Patent Attorney

U. BeLsU
COBURG
Mohrenstrasse 20
D - 96450 Coburg
Tel. +49 9581 871538
Fax +49 9581 871539
D-80750 München · P.O. BOX 440161 | Email: RSW@isarpatent.com | www.isarpatent.com

MÜNCHEN
Friedrichstrasse 31
D - 80801 München
Tel. +49 89 381610-0
Fax +49 89 3401479

ST. GEORGEN
Bahnhofstrasse 35
D - 78112 St. Georgen**
Tel. +49 7724 918478
Fax +49 7724 918477
CP00710E



European Patent Office
Postbus 5818
2280 HV RIJSWIJK
NETHERLANDS
Tel. +31 (0)70 340-2040
Fax +31 (0)70 340-3016



Skuhra, Udo
Reinhard-Skuhra-Weise & Partner GbR
Friedrichstrasse 31
80801 München
ALLEMAGNE

For any questions about
this communication:
Tel.: +31 (0)70 340 45 00

Date

07.01.08

Reference P21318 S/hen	Application No./Patent No. 05703842.4 - 1239 PCT/JP2005000605
Applicant/Proprietor ROHM CO., LTD.	

Proceeding further with the European patent application pursuant to Rule 70(2) EPC

A supplementary European search report has been drawn up concerning the above European patent application (publication number 1708069).

Since a request for examination has been filed (R. 70(1) EPC) and the examination fee has been paid (Art. 94(1) EPC) prior to the transmission of the supplementary European search report, you are hereby invited to indicate within

two months

of notification of this invitation whether you desire to proceed further with the European patent application.

If you do not indicate in due time that you desire to proceed further with the European patent application, it will be deemed to be withdrawn (R. 70(3) EPC).

If you wish you may comment on the supplementary European search report and amend, where appropriate, the description, claims and drawings (R. 70(2) EPC).

Receiving Section





Europäisches Patentamt
European Patent Office
Office européen des brevets

European Patent Office
Postbus 5818
2280 HV RIJSWIJK
NETHERLANDS
Tel. +31 (0)70 340-2040
Fax +31 (0)70 340-3016



Skuhra, Udo
Reinhard-Skuhra-Weise & Partner GbR
Friedrichstrasse 31
80801 München
ALLEMAGNE

For any questions about
this communication:
Tel.: +31 (0)70 340 45 00

Date

19.12.07

Reference P21318 S/hen	Application No./Patent No. 05703842.4 - 1239 PCT/JP2005000605
Applicant/Proprietor ROHM CO., LTD.	

Communication

The European Patent Office herewith transmits as an enclosure the supplementary European search report under Article 153(7) EPC for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

Refund of the search fee

If applicable under Article 9 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	US 5 646 520 A (FRANK RICHARD [US] ET AL) 8 July 1997 (1997-07-08) * the whole document -----	1-4
A	JP 09 167928 A (SANSEI DENSHI JAPAN KK) 24 June 1997 (1997-06-24) * the whole document -----	3
A	US 5 670 867 A (MITSUDA TSUYOSHI [JP]) 23 September 1997 (1997-09-23) * the whole document -----	
The supplementary search report has been based on the last set of claims valid and available at the start of the search.		
4	Place of search	Date of completion of the search
	The Hague	4 December 2007
		Examiner
		Arias Pérez, Jagoba
CATEGORY OF CITED DOCUMENTS		
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 05 70 3842

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-12-2007

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5646520	A	08-07-1997	US	5917319 A		29-06-1999
JP 9167928	A	24-06-1997		NONE		
US 5670867	A	23-09-1997	JP	2914231 B2	28-06-1999	
			JP	9045849 A	14-02-1997	



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
C (070) 3 40 20 40
FAX (070) 3 40 30 16

Europäisches
Patentamt

Generaldirektion 1

European
Patent Office

Directorate General 1

Office européen
des brevets

Direction générale 1

Skuhra, Udo
Reinhard-Skuhra-Weise & Partner GbR
Friedrichstrasse 31
80801 München
ALLEMAGNE



EPO Customer Services

Tel.: +31 (0)70 340 45 00

Date

06.09.06

Reference P21318 S/hen	Application No./Patent No. 05703842.4 - 2206 PCT/JP2005000605
Applicant/Proprietor ROHM CO., LTD.	

Notification of European publication number and information on the application of Article 67(3) EPC

You are hereby informed that the technical preparations for the publication of the translation of the above-mentioned international application as supplied to the EPO pursuant to Article 158(2) EPC have been completed.

The translation will be published on 04.10.06.

The publication number is: 1708069.

The publication in accordance with Article 158(3) EPC will be mentioned in European Patent Bulletin number 2006/40. (http://www.european-patent-office.org/e_pub/bulletin/index.htm).

The title of the invention in the three official languages of the European Patent Office is worded as follows:

ÜBERSTROMERKENNSCHALTUNG UND REGLER DAMIT
OVERCURRENT DETECTING CIRCUIT AND REGULATOR HAVING THE SAME
CIRCUIT DE DETECTION DE SURCHARGE DE COURANT ET REGULATEUR COMPORTANT UN
TEL CIRCUIT

The provisional protection under Article 67(1) and (2) EPC in the individual contracting states becomes effective only when the conditions referred to in Article 67(3) EPC have been fulfilled. For further information, also with respect to extension states, please refer to the EPO brochure "National Law relating to the EPC" (<http://www.european-patent-office/legal/national/index.htm>).

In all future communications to the EPO, please quote the application number as indicated above, i.e. including the final four figures (which identify the Directorate responsible for the subsequent procedure).

**REMARK:**

For European patent applications with a date of publication after 01.04.05, no paper copies will be forwarded to the applicant any longer. The publication can be downloaded, free of charge, from the EPO publication server <https://publications.european-patent-office.org> or can be ordered from the Vienna sub-office upon payment of a fee (see Decision of the President of the EPO dated 22 December 2004, OJ 2005, 124 and Notice from the EPO dated 22 December 2004 concerning the introduction of electronic publication of European patent applications (A-documents) and European patent specifications (B-documents) as well as changes to Rules 51(4), 54 and 108 EPC, OJ EPO 2005, 126).

Receiving Section



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
T (070) 3 40 20 40
FAX (070) 3 40 30 16

Europäisches
Patentamt

Generaldirektion 1

European
Patent Office

Directorate General 1

Office européen
des brevets

Direction générale 1

Skuhra, Udo
Reinhard-Skuhra-Weise & Partner GbR
Friedrichstrasse 31
80801 München
ALLEMAGNE



EPO Customer Services

Tel.: +31 (0)70 340 45 00

Date 29-08-2006

Reference P21318 S/hen	Application No./Patent No. 05703842.4 - 2206 PCT/JP2005000605
Applicant/Proprietor ROHM CO., LTD.	

Communication pursuant to Rules 109 and 110 EPC

(1) Amendment of application documents, especially the claims (R. 109 EPC)

The above mentioned international (Euro-PCT) application has entered the European phase, or can do so, once the necessary conditions are fulfilled.

Under Articles 28, 41 PCT, Rules 52, 78 PCT and Rule 86(2) to (4) EPC, the applicant may amend the application documents after receiving the international search report.

Whether or not he has already done so, he now has a further opportunity to file amended claims or other application documents within a non-extendable time limit of one month after notification of the present communication (R. 109 EPC).

The claims applicable on expiry of the above time limit, i.e. those filed on entry into the European phase or in response to the present communication, will form the basis for the calculation of any claims fee to be paid (see page 2) and for any supplementary search to be carried out under Article 157(2) EPC (R. 109 EPC).

**(2) Claims fees under Rule 110 EPC**

If the application documents on which the European grant procedure is to be based comprise more than ten claims, a claims fee shall be payable for the eleventh and each subsequent claim within the period provided for in Rule 107(1) EPC.

Based on the application documents currently on file, all necessary claims fees have already been paid (or the documents do not comprise more than 10 claims).

All necessary fees will be/have been debited automatically according to the automatic debit order.

The claims fee due for the claims to were not paid within the above-mentioned period.

Any non-paid claims fee, either based on the current set of claims or on any amended claims to be filed pursuant to Rule 109 EPC (see page 1), may still be validly paid within a non-extendable period of grace of one month after notification of this communication.

If a payment is made for only some of the claims, it must be indicated for which claims it is intended. If a claims fee is not paid in due time, the claim concerned is deemed to be abandoned (R. 110(4) EPC).

If claims fees have already been paid, but on expiry of the above-mentioned time limit there is a new set of claims containing fewer fee-incurring claims than previously, the claims fees in excess of those due under Rule 110(2), 2nd sentence, EPC will be refunded (R. 110(3) EPC).

You are reminded that any supplementary search under Article 157(2) EPC will relate only to the last set of claims applicable on expiry of the above time limit AND will be confined to those fee-incurring claims for which fees have been paid in due time.

The fee for the eleventh and each subsequent claim is EUR 45,00.

Receiving Section
Van Laar-Rabelink, Bertie



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 03-00242WO1	FOR FURTHER ACTION		See item 4 below
International application No. PCT/JP2005/000605	International filing date (day/month/year) 19 January 2005 (19.01.2005)	Priority date (day/month/year) 22 January 2004 (22.01.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant ROHM CO., LTD			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1, but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report
24 July 2006 (24.07.2006)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Yoshiko Kuwahara e-mail: pt07@wipo.int
---	---

特許協力条約

発信人 日本国特許庁 (国際調査機関)

代理人

藤河 恒生

様

あて名

〒520-2153

滋賀県大津市一里山四丁目9番82号
こなん特許事務所

REC'D 21 APR 2005

WIPO

PCT

PCT

国際調査機関の見解書

(法施行規則第40条の2)

[PCT規則43の2.1]

19.4.2005

発送日
(日.月.年)

出願人文は代理人
の書類記号

03-00242WO1

今後の手続きについては、下記2を参照すること。

国際出願番号
PCT/JP2005/000605

国際出願日
(日.月.年) 19.01.2005

優先日
(日.月.年) 22.01.2004

国際特許分類 (IPC) Int.Cl.⁷

G05F 1/56, 1/10, H02H 3/087

出願人 (氏名又は名称)

ローム株式会社

1. この見解書は次の内容を含む。

- 第I欄 見解の基礎
- 第II欄 優先権
- 第III欄 新規性、進歩性又は産業上の利用可能性についての見解の不作成
- 第IV欄 発明の単一性の欠如
- 第V欄 PCT規則43の2.1(a)(i)に規定する新規性、進歩性又は産業上の利用可能性についての見解、それを裏付けるための文献及び説明
- 第VI欄 ある種の引用文献
- 第VII欄 国際出願の不備
- 第VIII欄 国際出願に対する意見

2. 今後の手続き

国際予備審査の請求がされた場合は、出願人がこの国際調査機関とは異なる国際予備審査機関を選択し、かつ、その国際予備審査機関がPCT規66.1の2(b)の規定に基づいて国際調査機関の見解書を国際予備審査機関の見解書とみなさない旨を国際事務局に通知していた場合を除いて、この見解書は国際予備審査機関の最初の見解書とみなされる。

この見解書が上記のように国際予備審査機関の見解書とみなされる場合、様式PCT/ISA/220を送付した日から3月又は優先日から22月のうちいずれか遅く満了する期限が経過するまでに、出願人は国際予備審査機関に、適当な場合は補正書とともに、答弁書を提出することができる。

さらなる選択肢は、様式PCT/ISA/220を参照すること。

3. さらなる詳細は、様式PCT/ISA/220の備考を参照すること。

見解書を作成した日

04.04.2005

名称及びあて先

日本国特許庁 (ISA/JP)

郵便番号100-8915

東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

3V 2917

櫻田 正紀

電話番号 03-3581-1101 内線 3356

第1欄 見解の基礎

1. この見解書は、下記に示す場合を除くほか、国際出願の言語を基礎として作成された。

この見解書は、_____語による翻訳文を基礎として作成した。
それは国際調査のために提出されたPCT規則12.3及び23.1(b)にいう翻訳文の言語である。

2. この国際出願で開示されかつ請求の範囲に係る発明に不可欠なヌクレオチド又はアミノ酸配列について、
以下に基づき見解書を作成した。

a. タイプ 配列表
 配列表に関連するテーブル

b. フォーマット 書面
 コンピュータ読み取り可能な形式

c. 提出時期 出願時の国際出願に含まれる
 この国際出願と共にコンピュータ読み取り可能な形式により提出された
 出願後に、調査のために、この国際調査機関に提出された

3. さらに、配列表又は配列表に関連するテーブルを提出した場合に、出願後に提出した配列若しくは追加して提出した配列が出願時に提出した配列と同一である旨、又は、出願時の開示を超える事項を含まない旨の陳述書の提出があった。

4. 棚足意見：

第V欄 新規性、進歩性又は産業上の利用可能性についてのPCT規則43の2.1(a)(i)に定める見解、それを裏付ける文献及び説明

1. 見解

新規性 (N)	請求の範囲 1-4	有
	請求の範囲	無
進歩性 (IS)	請求の範囲 1-4	有
	請求の範囲	無
産業上の利用可能性 (IA)	請求の範囲 1-4	有
	請求の範囲	無

2. 文献及び説明

文献1 JP 5-76133 A (新日本無線株式会社) 26. 03. 1993,
【0002】-【0003】、図3 (ファミリーなし)

文献2 US 2003/0122530 A1 (Takahiro HIKITA) 03. 07. 2003,
全文、図1-図4 & JP 2003-173211 A

文献3 JP 8-331757 A (株式会社東芝、東芝情報システム株式会社)
13. 12. 1996, 全文、図1-4 (ファミリーなし)

文献4 JP 10-322185 A (日本電気株式会社) 04. 12. 1998,
【0003】-【0006】、図3 (ファミリーなし)

文献5 US 5159516 A (Tatsuhiko FUJIHIRA) 27. 10. 1992, 図3
& JP 5-26912 A & GB 2253709 A
& DE 4207568 A

文献6 EP 0881769 A2 (NEC CORPORATION) 02. 12. 1998, 図2
& JP 10-332751 A & US 5973551 A

請求の範囲1-4に記載された発明は、国際調査報告で引用された文献に対して進歩性を有する。文献1-6には、

電源電圧が入力端に、検出用バイアス電圧が制御端に入力され、出力端がモニタ用トランジスタの入力端に接続される出力電流検出用トランジスタと、

電源電圧が入力端に、検出用バイアス電圧が制御端に入力されて出力端から定電流源に基準電流を流し込むリファレンス用トランジスタと、

出力電流検出用トランジスタの出力端の電圧とリファレンス用トランジスタの出力端の電圧を比較することにより、出力トランジスタに過電流が流れたときそれを検出して過電流検出信号を出力する比較回路と、

を備えてなる、過電流検出回路

が記載されておらず、しかもその点は当業者といえども自明のものではない。



To the European Patent Office

Entry into the European phase (EPO as designated or elected Office)

European application number	EP05703842.4
PCT application number	PCT/JP2005/000605
PCT publication number	WO2005071511
Applicant's or representative's reference	P21318 S/hen
1. Applicant	
Particulars of the applicant(s) are contained in the international publication or were recorded by the International Bureau subsequent to the international publication.	
Changes which have not yet been recorded by the International Bureau are set out here:	
Address for correspondence	
2. Representative 1	
This is the representative who will be listed in the Register of European Patents and to whom notifications will be made	
Name	SKUHRA, Dipl.-Ing. Udo
Registration No	100005494
Address of place of business	Reinhard, Skuhra, Weise & Partner GbR Friedrichstrasse 31 München, 80801 Germany +49-89-3816100 +49-89-3401479 rsw@isarpatent.com
Telephone	
Fax	
e-mail	
Any additional representative(s) is/are listed here:	
3. General Authorisation:	
An individual authorisation is attached.	
A general authorisation has been registered under No:	
A general authorisation has been filed, but not yet registered.	
The authorisation filed with the EPO as PCT receiving Office expressly includes the European phase.	
4. Request for examination	
Examination of the application under Art. 94 EPC is hereby requested. The examination fee is being (has been, will be) paid.	
Request for examination in an admissible non-EPO language:	
5. Copies	
One or more additional sets of copies of the documents cited in the supplementary European search report are hereby requested.	
Number of additional sets of copies	2
6. Documents intended for proceedings before the EPO	
6.1 Proceedings before the EPO as designated Office (PCT I) are to be based on the following documents:	
the application documents published by the International Bureau (with all claims, description and drawings), where applicable with amended claims under Art. 19 PCT unless replaced by the amendments attached.	

<p><i>Where necessary, clarifications should be attached as 'Other Documents'</i></p> <p>6.2 Proceedings before the EPO as elected Office (PCT II) are to be based on the following documents:</p> <p>the documents on which the international preliminary examination report is based, including any annexes unless replaced by the amendments attached.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p><i>Where necessary, clarifications should be attached as 'Other Documents'</i></p> <p>If the EPO as International Preliminary Examining Authority has been supplied with test reports, these may be used as the basis of proceedings before the EPO.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>7. Translations</p> <p>Translations in one of the official languages of the EPO (English, French, German) are attached as crossed below:</p> <p>* <i>In proceedings before the EPO as designated or elected Office (PCT I + II):</i></p> <p>Translation of the international application (description, claims, any text in the drawings) as originally filed, of the abstract as published and of any indication under Rule 13bis.3 and 13bis.4 PCT regarding biological material</p> <p>Translation of the priority application(s)</p> <p>It is hereby declared that the international application as originally filed is a complete translation of the previous application (Rule 38(5) EPC)</p> <p>* <i>In addition, in proceedings before the EPO as designated Office (PCT I):</i></p> <p>Translation of amended claims and any statement under Art. 19 PCT, if the claims as amended are to form the basis for the proceedings before the EPO (see Section 6).</p> <p>* <i>In addition, in proceedings before the EPO as elected office (PCT II):</i></p> <p>Translation of annexes to the international preliminary examination report</p>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>8. Biological material</p> <p>The invention relates to and/or uses biological material deposited under Rule 28 EPC.</p> <p>The particulars referred to in Rule 28(1)(c) EPC (if not yet known, the depositary institution and the identification reference(s)) [number, symbols, etc.] of the depositor) are given in the international publication or in the translation submitted under Section 7 on:</p> <p>page(s) / line(s)</p> <p>A copy of the receipt(s) of deposit issued by the depositary institution is attached</p> <p>will be filed at a later date</p> <p>A waiver of the right to an undertaking from the requester pursuant to Rule 28(3) EPC is attached.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>9. Nucleotide and amino acid sequences</p> <p>The items required under Rules 5.2 and 13ter PCT and Rule 111(3) EPC have already been furnished to the EPO.</p> <p>The sequence listing as part of the description is attached in PDF format.</p> <p>The sequence listing does not include matter that goes beyond the content of the application as filed.</p> <p>In addition, the sequence listing data is attached in computer-readable form in accordance with WIPO Standard 25.</p> <p>The sequence listing data in computer-readable form in accordance with WIPO Standard 25 is identical to the sequence listing in PDF format.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>10. Designation fees</p> <p>10.1 It is currently intended to pay seven times the amount of the designation fee. The designation fees for all the EPC contracting states designated in the international application are thereby deemed to have been paid (Art. 2 No. 3 RFees).</p> <p>10.2 It is currently intended to pay fewer than seven designation fees for the following EPC contracting states designated in the international application:</p> <p>DE FR GB NL</p>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>10.3 It is requested that no communication under Rules 85a(1) or 69(1) need be notified in respect of the contracting states not indicated. If an automatic debit order has been</p>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

issued, the EPO is authorised, on expiry of the basic period under Article 79(2), to debit seven times the amount of the designation fee. If less than seven states are indicated, the EPO shall debit designation fees only for those states, unless it is instructed to do otherwise before expiry of the basic period.

11. Extension of the European patent

This application is also considered as being a request for extension to all the non-contracting states to the EPC designated in the international application with which "extension agreements" were in force on the date of filing the international application. However, the extension only takes effect if the prescribed extension fee is paid.

It is currently intended to pay the extension fee for the following states:



12. List of enclosed documents

	Description of document	Original file name	Assigned file name
1	Translation of abstract as published	P21318_ABSTRACT(001).PDF	ABSTTRAN.PDF
2	Translation of the description as originally filed	P21318_DESCRPT.(001).PDF	DESCTRAN.PDF
3	Translation of the claims as originally filed	P21318 CLAIMS(001).PDF	CLMSTRAN.PDF
4	Translation of any text in the drawings as originally filed	P21318_DRAWINGS(001).PDF	DRAWTRAN.PDF

13. Debit from deposit account

Currency



EUR

The European Patent Office is hereby authorised, to debit from the deposit account with the EPO any fees and costs indicated on the fees page.

Deposit account number

28000484

Account holder

Reinhard Skuhra Weise & Partners

14. Reimbursements (if any) should be made to the following EPO deposit account:

Number and account holder



Reinhard Skuhra Weise & Partners,
28000484

15. Fees

		Factor/Reduction applied	Fee schedule	Amount to be paid
15-1	002e Fee for supplementary European search for applications filed before 01.07.2005	0.8	720.00	576.00
15-2	005 Designation fee	4	80.00	320.00
15-3	006e Examination fee (Euro-PCT without supplementary European search report)	1	1 490.00	1 490.00
15-4	020 Basic national fee for an international application	1	95.00	95.00
15-5	055 Additional copy	2	25.00	50.00
	Total:		EUR	2 531.00

16. Annotations

17. Signature(s) of applicant(s) or representative

Place:

München

Date:

28.July 2006

Signed by:

DE, Reinhard Skuhra Weise & Partner, U.
Skuhra 8355

Capacity:

(Representative)